

LISTING OF THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) Separating cyclone for at least partially separating a mixture of fluids of different density into a light fraction with a relatively low density and a heavy fraction with a relatively high density, comprising:

an outer casing which defines a flow space through which the mixture is to flow;

an inlet connected distally to the outer casing for admitting the mixture for separating into the flow space,

a flow body disposed in the flow space wherein the mixture can be guided in a flow direction through the flow space and between the flow body and the outer casing and wherein the flow body has a distal part of decreasing diameter in the flow direction;

a rotator device in the flow space for setting into rotation the mixture for separating;

a first outlet connected proximally to the outer casing for discharging the heavy fraction from the flow space;

a second outlet disposed in the flow space for discharging the light fraction from the flow space, and

at least one bypass channel at the distal part of the flow body, each bypass channel being shaped and positioned for guiding a part of the mixture flowing along the flow body in the flow direction.

2. (Previously Presented) Separating cyclone as claimed in claim 1, wherein the flow body of decreasing diameter has a larger diameter and decreases in diameter to a smaller diameter, and the at least one bypass channel extends from a first position, at which the flow body has a relatively larger diameter, to a second position at which the flow body has a relatively smaller diameter.

3. (Previously Presented) Separating cyclone as claimed in claim 1, wherein the at least one bypass channel is substantially annular in a cross-section through the flow body.

4. (Previously Presented) Separating cyclone as claimed in claim 1, wherein the at least one bypass channel is embodied coaxially with the flow body.

5. (Previously Presented) Separating cyclone as claimed in claim 1, wherein the distal part of the flow body has a conical form.

6. (Previously Presented) Separating cyclone as claimed in claim 1, wherein the inlet comprises an inlet part extending axially relative to the outer casing and debouching in the flow space.

7. (Previously Presented) Separating cyclone as claimed in claim 1, wherein the inlet comprises an inlet part extending tangentially relative to the flow space and debouching in the flow space.

8. (Cancelled)

9. (Previously Presented) Separating cyclone as claimed in claim 1, wherein the rotator device comprises at least one swirl blade shaped and oriented for causing the mixture to swirl as it flows.

10. (Previously Presented) Separating cyclone as claimed in claim 9, wherein the rotator device is fixed to at least one of the flow body and the outer casing.

11. (Previously Presented) Separating cyclone as claimed in claim 1, wherein the outer casing has an inner side and the rotator device is formed by the inner side of the outer casing.

12. (Previously Presented) Separating cyclone as claimed in claim 11, wherein the outer casing has the form of an axially extending surface of revolution.

13. (Previously Presented) Separating cyclone as claimed in claim 11, wherein the inner side of the outer casing has a substantially cylindrical form.

14. (Previously Presented) Separating cyclone as claimed in claim 1, wherein the outer casing has a decreasing diameter at the position of the distal part of the flow body.

15. (Original) Separating cyclone as claimed in claim 14, wherein the diameter of the outer casing is adapted to the diameter of the flow body such that an almost constant flow surface is provided.

16. (Previously Presented) Separating cyclone as claimed in claim 1, wherein the first outlet comprise a discharge pipe extending coaxially with the flow space.

17. (Previously Presented) Separating cyclone as claimed in claim 16, wherein the second outlet comprises a discharge channel extending through the flow body, the discharge channel has an inlet opening which is positioned at the distal end of the flow body.

18. (Previously Presented) Flow body for placement into a separating cyclone for at least partially separating a mixture of fluids of different density into a light fraction with a relatively low density and a heavy fraction with a relatively high density, wherein the flow body comprises a proximal part on which a rotating device is arranged for setting into rotation the mixture flowing along the body, and also comprises a distal part of decreasing diameter in a flow direction of the mixture, at least one bypass channel at the distal part via which a part of the fluid flowing along the flow body can be guided.

19. (Previously Presented) Flow body as claimed in claim 18, wherein the flow body of decreasing diameter has a larger diameter and decreases in diameter to a smaller diameter, and the at least one bypass channel extends from a first position, at which the flow body has a relatively larger diameter, to a second position at which the flow body has a relatively smaller diameter.

20. (Previously Presented) Flow body as claimed in claim 18, wherein the at least one bypass channel is substantially annular in a cross-section through the flow body.

21. (Previously Presented) Flow body as claimed claim 18, wherein the at least one bypass channel is embodied co-axially with the flow body.

22. (Previously Presented) Flow body as claimed in claim 18, wherein the distal part of the flow body has a conical form.

23. (Cancelled).

24. (Currently Amended) Method for at least partially separating a mixture of fluids of different density into a light fraction with a relatively low density and a heavy fraction with a relatively high density, comprising:

feeding the mixture for separating into a flow space defined by and between an outer casing and a flow body disposed in the casing;

setting the mixture into rotation in the flow space;

guiding the mixture, once set into rotation, along the flow body disposed in the flow space;

discharging the heavy fraction via a first outlet connected proximally to the outer casing;

discharging the light fraction from the flow space via a second outlet disposed in the flow space, and

guiding a part of the mixture flowing along the flow body through at least one bypass channel arranged in the flow body at a distal part of the flow body .

25. (Previously Presented) Method as claimed in claim 24, comprising axially supplying the mixture for separating and, using swirl blades arranged between the outer casing and the flow body for setting into rotation the mixture flowing therealong.

26. (Previously Presented) Method as claimed in claim 24, comprising tangentially supplying the mixture for separating and, using the outer casing, setting into rotation the mixture flowing therealong.

27. (Cancelled).

28. (Previously Presented) Separating cyclone as claimed in claim 1, wherein the heavy fraction substantially comprises water and the light fraction substantially comprises oil.

29. (Currently Amended) Method as claimed in ~~claims~~ claim 24, wherein the heavy fraction substantially comprises water and the light fraction substantially comprises oil.

30. (Original) Separating cyclone as claimed in claim 1, wherein the second outlet comprises a discharge channel extending through the flow body, the discharge channel has an inlet opening which is positioned at the distal end of the flow body.